UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,417	06/14/2000	Raymond Andersen	108281-00001	8238

7590 04/18/2003

Arent Fox Kintner Plotkin & Kahn PLLC
1050 Connecticut Avenue N W Suite 600
Washington, DC 20036-5339

EXAMINER	
LUKTON, DAVID	
ART UNIT	PAPER NUMBER
1653	

DATE MAILED: 04/18/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/593,417	ANDERSEN ET AL.	
	Examiner	Art Unit	
	David Lukton	1653	

-- The MAILING DATE f this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 8-12* is/are pending in the application.

4a) Of the above claim(s) *2-4* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 8-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Pursuant to the directives of paper No. 15 (filed 1/10/03), claims 1-4 have been amended. Claims 1-4, 8-12 remain pending. Claims 2-4 are withdrawn from consideration as being drawn to non-elected subject matter. Within the elected group, at least one of R_{70} and R_{71} is a substituent other than hydrogen (with the proviso that G1 is excluded). Each of claims 2-4 permits both R_{70} and R_{71} to be a hydrogen atom. It is true that each of claims 2-4 is dependent on claim 1; consider, however, the wording of claims 2-4. Each recites the following:

"A compound of general formula I described in claim 1"

Contrast that with the following:

A compound according to claim 1

Thus, the language of claims 2-4 is <u>not</u> such as to assert subgenericity; the common element is just that of formula I, not the definition of the substituent variables. It is suggested that each of claims 2-4 be amended to preclude the possibility of R_{70} and R_{71} simultaneously representing hydrogen. Claims 1 and 8-12 are examined in this Office action.

Applicants' arguments filed 1/10/03 have been considered and found persuasive in part. The rejection of claim 1 over Bogden is withdrawn, as is the rejection of claim 1 over Kashman (USP 5,661,175).

*

The following is a quotation of the first paragraph of 35 U.S.C. §112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 9 is drawn to a "pharmaceutical composition", and moreover, explicitly recites the phrase "for treating cancer". However, enablement for this is lacking. Applicants have provided in vitro data which shows growth inhibition of carcinoma cells and of leukemia cells. It is stipulated that such growth inhibition will occur *in vivo* as well. However, treatment of cancer is another matter altogether. As applicants may be aware, there are vast numbers of compounds which are cytotoxic to tumor cells *in vitro*, yet which are not effective to bring relief to patients stricken with cancer. While there have been some successes in the treatment of cancer using cytotoxic agents, successes have been few and far between.

In response to the foregoing, applicants have argued that the Court in *In re Brana* asserted that claims drawn to a method of treating cancer in humans (or other mammals) would be enabled by *in vitro* data. However, applicants are not correct. The application at issue matured into U.S. Patent 5,552,544. The claims in that patent are

drawn solely to compounds *per se*. There are no method-of-use claims, and no claims drawn to a "pharmaceutical composition". Thus, the Court never ruled on the issue of whether a claim drawn to a method of treating cancer, or a claim drawn to a "pharmaceutical composition" would be enabled by *in vitro* data. If applicants still believe that the Court argued that a rejection against such claims would be improper, applicants are requested to point to the exact passage in the opinion where this is stated.

As stated in *Ex parte Forman* (230 USPQ 546, 1986) and *In re Wands* (8 USPQ2d 1400, Fed. Cir., 1988), the factors to consider in evaluating the need (or absence of need) for "undue experimentation" are the following: quantity of experimentation necessary, amount of direction or guidance presented, presence or absence of working examples, nature of the invention, state of the prior art, relative skill of those in that art, predictability or unpredictability of the art, and breadth of the claims. The following references discuss the matter of various attempts by oncologists to treat cancer: Viallet (*Lung Cancer* **15** (3) 367-73, 1996); Kemeny (*Seminars in Oncology* **21** (4 Suppl 7) 67-75, 1994); Newton (*Expert Opinion on Investigational Drugs* **9** (12) 2815-29, 2000); Giese (*Journal of Cancer Research and Clinical Oncology* **127** (4) 217-25, 2001); Garattini (*European Journal of Cancer* **37** Suppl 8 S128-47, 2001); Ragnhammar (*Acta Oncologica* **40** (2-3) 282-308, 2001). As is evident, attempts to treat cancer using agents which have exhibited *in vitro* activity (only) leads to "unpredictable" results. As it happens, "undue experimentation"

would be required to practice the claimed invention. Either of the following is suggested:

A composition comprising a compound according to claim 1 in combination with a pharmaceutically acceptable carrier.

A composition comprising a a pharmaceutically acceptable carrier together with a compound according to claim 1 in an amount effective to inhibit growth of tumor cells.

*

Claims 1, 8-12 are rejected under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites that "R_{73} is absent when R_6 represents a methylene group... as hereinafter described". However, it does not appear that there is such a description of R_6 as "hereinafter described". Applicants are requested to point to the location in the text of claim 1 where this may be found. The same issue applies for the case of R_6 representing " -CH= " .

*

The following is a quotation of the appropriate paragraphs of 35 U.S.C §102 that form the basis for the rejections under this section made in this action.

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the

United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2) and (4) of section 371(c) of this title before the invention thereof by the applicant for the patent.

Claim 1 is rejected under 35 U.S.C. §102(a) as being anticipated by Crews (*J. Org. Chem.* **59**, 2932, 1994).

As indicated previously, Crews discloses the compound designated milnamide A. This corresponds to a compound within the genus of instant claim 1 as follows:

R6 = a methylene group bonded to the indole group, forming a 6-membered ring;

R1 = methyl

R75 = -CH(iPr)-CH=CH(Me)-COOH

In response, applicants have not argued that the rejection is improper given the claims as rendered. Instead, applicants have argued that the rejection is directed at non-elected subject matter. Applicants are correct on this point; nevertheless claim 1 still encompasses the non-elected subject matter. Claim 1 recites that R_{73} is absent when R_6 represents a methylene group. Thus, claim 1 still encompasses the possibility that R_6 can represent a methylene group. As the claim stands, the rejection is still justified

It is noted that a vertical line passes through all of the pages of paper No. 9 (filed 2/27/02). The persons responsible for printing the final document may question the meaning of this line. Accordingly, prior to issuance of a notice of allowance, a new copy of each claim (without the vertical line) should be provided for each claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lukton whose telephone number is 703-308-3213. The examiner can normally be reached Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low, can be reached at (703) 308-2923. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

DAVID LUKTON
PATENT EXAMINER
GROUP 1800